



SGM 6945.4
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of William K. Kappel et al.

Serial No. 10/667,928

Filed September 22, 2003

For METAL CHELATING COMPOSITIONS FOR PROTEIN PURIFICATION, DETECTION
OR BINDING

December 23, 2003

COMMISSIONER FOR PATENTS

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SIR:

INFORMATION DISCLOSURE STATEMENT

* In accordance with 37 C.F.R. 1.97 and 1.98 and MPEP 609, and in compliance with the
duty of disclosure set forth in 37 C.F.R. 1.56, applicants submit the attached PTO/SB/08A for
consideration by the Patent and Trademark Office in the above-entitled application and to be
made of record therein. In accordance with the Pre-OG notice of July 11, 2003 partially waiving
the requirements of 37 C.F.R. 1.98(a)(2)(i), copies of the U.S. patent documents are not supplied.

The references listed on the attached PTO/SB/08A have been previously submitted in
parent application Serial No. 09/558,001 and, therefore, in accordance with MPEP 609, are not
being provided at this time.

Respectfully submitted,

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EJH/JPK/mlw

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PTO/SB/08A INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	10/667,928
				Filing Date	September 22, 2003
				Confirmation Number	To be assigned
				First Named Inventor	William K. Kappel et al.
				Group Art Unit	To be assigned
				Examiner Name	To be assigned
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U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code ² (if known)		
	1	2,205,995		Ulrich et al.	06-25-1940
	2	2,885,428		Luskin	05-05-1959
	3	3,337,607		Wollensak	08-22-1967
	4	3,959,342		Homberg et al.	05-25-1976
	5	4,569,794		Smith et al.	02-11-1986
	6	4,664,806		Merz	05-12-1987
	7	4,677,027		Porath et al.	06-30-1987
	8	4,877,830		Dobeli et al.	10-31-1989
	9	5,047,513		Dobeli et al.	09-10-1991
	10	5,284,933		Dobeli et al.	02-08-1994
	11	5,514,363		Shochat et al.	05-07-1996
	12	5,625,075		Srinivasan et al.	04-29-1997
	13	5,747,663		Colpan et al.	05-05-1998
	14	5,834,224		Ruger et al.	11-10-1998
	15	5,990,301		Colpan et al.	11-23-1999

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached or place an "A" here if English language abstract is attached..

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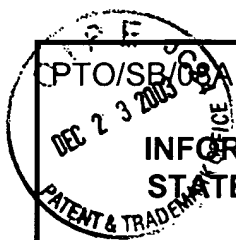
FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T ⁶
		Office	Number ⁴	Kind Code ² (if known)			
	16	EP	0 189 373	A2	Ciba-Geigy AG	07-30-1986	
	17	EP	0 253 303	A2	F. Hoffmann-La Roche & Co.	01-20-1988	
	18	WO	93/11735	A1	Aquanautics Corporation	06-24-1993	
OTHER ART - NON PATENT LITERATURE DOCUMENTS							
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.					T
	19	SCHMITT et al., "Affinity Purification of Histidine-tagged Proteins", Molecular Biology Reports, 1993, pp. 223-230, Vol. 18					
	20	PORATH et al., "Immobilized Metal Ion Affinity Adsorption and Immobilized Metal Ion Affinity Chromatography of Biomaterials. Serum Protein Affinities for Gel-Immobilized Iron and Nickel Ions", Biochemistry, 1983, pp. 1621-1630, Vol. 22					
	21	SULKOWSKI, "Immobilized Metal Ion Affinity Chromatography of Proteins", Protein Purification: Micro to Macro pp. 149-162, Edited by R. Burgess, Published by Liss New York, NY					
	22	International Search Report from analogous PCT application No. PCT/US01/11529 dated October 16, 2001					
	23	LONNERDAL et al., Journal of Applied Biochemistry, 1983, p. 203, Vol. 4					
	24	PORATH et al., "Metal Chelate Affinity Chromatography, a New Approach to Protein Fractionation", Nature, December 18, 1975, pp. 598-599, Vol. 258					

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25	HOCHULI et al., "New Metal Chelate Adsorbent Selective for Proteins and Peptides Containing Neighbouring Histidine Residues", Journal of Chromatography, 1987, pp. 177-184, Vol. 411
26	Partial International Search Report from analogous PCT application No. PCT/US01/11529
27	JANKNECHT et al., "Rapid and Efficient Purification of Native Histidine-tagged Protein Expressed by Recombinant Vaccinia Virus", Proc. Natl. Acad. Sci. USA, October, 1991, pp. 8972-8976, Vol. 88
28	F. ANSPACH, "Silica-based metal chelate affinity sorbents I. Preparation and characterization of iminodiacetic acid affinity sorbents prepared via different immobilization techniques", Journal of Chromatography A, 1994, pp. 35-49, Vol. 672

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